



#4/A

SEQUENCE LISTING

<110> Brenda F. Baker
Lex M. Cowser

<120> ANTISENSE MODULATION OF MATRIX METALLOPROTEINASE 1 EXPRESSION

<130> RTS-0139

<160> 89

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 1
tccgtcatcg ctcttcaggg 20

<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 2
atgcattctg cccccaagga 20

<210> 3
<211> 1970
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (69)...(1478)

<400> 3
atattggagt agcaagaggc tgggaagcca tcacttacct tgcactgaga aagaagacaa 60

aggccagt atg cac agc ttt cct cca ctg ctg ctg ctg ttc tgg ggt 110
Met His Ser Phe Pro Pro Leu Leu Leu Leu Leu Phe Trp Gly
1 5 10

gtg gtg tct cac agc ttc cca gcg act cta gaa aca caa gag caa gat 158
Val Val Ser His Ser Phe Pro Ala Thr Leu Glu Thr Gln Glu Gln Asp
15 20 25 30

gtg gac tta gtc cag aaa tac ctg gaa aaa tac tac aac ctg aag aat 206
Val Asp Leu Val Gln Lys Tyr Leu Glu Lys Tyr Tyr Asn Leu Lys Asn
35 40 45

gat ggg agg caa gtt gaa aag cgg aga aat agt ggc cca gtg gtt gaa 254

Asp	Gly	Arg	Gln	Val	Glu	Lys	Arg	Arg	Asn	Ser	Gly	Pro	Val	Val	Glu		
			50					55					60				
aaa	ttg	aag	caa	atg	cag	gaa	ttc	ttt	ggg	ctg	aaa	gtg	act	ggg	aaa	302	
Lys	Leu	Lys	Gln	Met	Gln	Glu	Phe	Phe	Gly	Leu	Lys	Val	Thr	Gly	Lys		
		65					70					75					
cca	gat	gct	gaa	acc	ctg	aag	gtg	atg	aag	cag	ccc	aga	tgt	gga	gtg	350	
Pro	Asp	Ala	Glu	Thr	Leu	Lys	Val	Met	Lys	Gln	Pro	Arg	Cys	Gly	Val		
	80					85					90						
cct	gat	gtg	gct	cag	ttt	gtc	ctc	act	gag	ggg	aac	cct	cgc	tgg	gag	398	
Pro	Asp	Val	Ala	Gln	Phe	Val	Leu	Thr	Glu	Gly	Asn	Pro	Arg	Trp	Glu		
	95			100						105					110		
caa	aca	cat	ctg	acc	tac	agg	att	gaa	aat	tac	acg	cca	gat	ttg	cca	446	
Gln	Thr	His	Leu	Thr	Tyr	Arg	Ile	Glu	Asn	Tyr	Thr	Pro	Asp	Leu	Pro		
			115					120						125			
aga	gca	gat	gtg	gac	cat	gcc	att	gag	aaa	gcc	ttc	caa	ctc	tgg	agt	494	
Arg	Ala	Asp	Val	Asp	His	Ala	Ile	Glu	Lys	Ala	Phe	Gln	Leu	Trp	Ser		
			130					135					140				
aat	gtc	aca	cct	ctg	aca	ttc	acc	aag	gtc	tct	gag	ggt	caa	gca	gac	542	
Asn	Val	Thr	Pro	Leu	Thr	Phe	Thr	Lys	Val	Ser	Glu	Gly	Gln	Ala	Asp		
		145					150					155					
atc	atg	ata	tct	ttt	gtc	agg	gga	gat	cat	cgg	gac	aac	tct	cct	ttt	590	
Ile	Met	Ile	Ser	Phe	Val	Arg	Gly	Asp	His	Arg	Asp	Asn	Ser	Pro	Phe		
	160					165					170						
gat	gga	cct	gga	gga	aat	ctt	gct	cat	gct	ttt	caa	cca	ggc	cca	ggt	638	
Asp	Gly	Pro	Gly	Gly	Asn	Leu	Ala	His	Ala	Phe	Gln	Pro	Gly	Pro	Gly		
	175				180					185					190		
att	gga	ggg	gat	gct	cat	ttt	gat	gaa	gat	gaa	agg	tgg	acc	aac	aat	686	
Ile	Gly	Gly	Asp	Ala	His	Phe	Asp	Glu	Asp	Glu	Arg	Trp	Thr	Asn	Asn		
			195					200						205			
ttc	aga	gag	tac	aac	tta	cat	cgt	gtt	gcg	gct	cat	gaa	ctc	ggc	cat	734	
Phe	Arg	Glu	Tyr	Asn	Leu	His	Arg	Val	Ala	Ala	His	Glu	Leu	Gly	His		
		210						215					220				
tct	ctt	gga	ctc	tcc	cat	tct	act	gat	atc	ggg	gct	ttg	atg	tac	cct	782	
Ser	Leu	Gly	Leu	Ser	His	Ser	Thr	Asp	Ile	Gly	Ala	Leu	Met	Tyr	Pro		
		225					230					235					
agc	tac	acc	ttc	agt	ggg	gat	gtt	cag	cta	gct	cag	gat	gac	att	gat	830	
Ser	Tyr	Thr	Phe	Ser	Gly	Asp	Val	Gln	Leu	Ala	Gln	Asp	Asp	Ile	Asp		
	240					245					250						
ggc	atc	caa	gcc	ata	tat	gga	cgt	tcc	caa	aat	cct	gtc	cag	ccc	atc	878	
Gly	Ile	Gln	Ala	Ile	Tyr	Gly	Arg	Ser	Gln	Asn	Pro	Val	Gln	Pro	Ile		
	255				260					265					270		
ggc	cca	caa	acc	cca	aaa	gca	tgt	gac	agt	aag	cta	acc	ttt	gat	gct	926	
Gly	Pro	Gln	Thr	Pro	Lys	Ala	Cys	Asp	Ser	Lys	Leu	Thr	Phe	Asp	Ala		
				275				280						285			
ata	act	acg	att	cgg	gga	gaa	gtg	atg	ttc	ttt	aaa	gac	aga	ttc	tac	974	
Ile	Thr	Thr	Ile	Arg	Gly	Glu	Val	Met	Phe	Phe	Lys	Asp	Arg	Phe	Tyr		

290	295	300	
atg cgc aca aat ccc ttc tac ccg gaa gtt gag ctc aat ttc att tct Met Arg Thr Asn Pro Phe Tyr Pro Glu Val Glu Leu Asn Phe Ile Ser 305 310 315			1022
ggt ttc tgg cca caa ctg cca aat ggg ctt gaa gct gct tac gaa ttt Val Phe Trp Pro Gln Leu Pro Asn Gly Leu Glu Ala Ala Tyr Glu Phe 320 325 330			1070
gcc gac aga gat gaa gtc cgg ttt ttc aaa ggg aat aag tac tgg gct Ala Asp Arg Asp Glu Val Arg Phe Phe Lys Gly Asn Lys Tyr Trp Ala 335 340 345 350			1118
ggt cag gga cag aat gtg cta cac gga tac ccc aag gac atc tac agc Val Gln Gly Gln Asn Val Leu His Gly Tyr Pro Lys Asp Ile Tyr Ser 355 360 365			1166
tcc ttt ggc ttc cct aga act gtg aag cat atc gat gct gct ctt tct Ser Phe Gly Phe Pro Arg Thr Val Lys His Ile Asp Ala Ala Leu Ser 370 375 380			1214
gag gaa aac act gga aaa acc tac ttc ttt gtt gct aac aaa tac tgg Glu Glu Asn Thr Gly Lys Thr Tyr Phe Phe Val Ala Asn Lys Tyr Trp 385 390 395			1262
agg tat gat gaa tat aaa cga tct atg gat cca ggt tat ccc aaa atg Arg Tyr Asp Glu Tyr Lys Arg Ser Met Asp Pro Gly Tyr Pro Lys Met 400 405 410			1310
ata gca cat gac ttt cct gga att ggc cac aaa gtt gat gca gtt ttc Ile Ala His Asp Phe Pro Gly Ile Gly His Lys Val Asp Ala Val Phe 415 420 425 430			1358
atg aaa gat gga ttt ttc tat ttc ttt cat gga aca aga caa tac aaa Met Lys Asp Gly Phe Phe Tyr Phe Phe His Gly Thr Arg Gln Tyr Lys 435 440 445			1406
ttt gat cct aaa acg aag aga att ttg act ctc cag aaa gct aat agc Phe Asp Pro Lys Thr Lys Arg Ile Leu Thr Leu Gln Lys Ala Asn Ser 450 455 460			1454
tgg ttc aac tgc agg aaa aat tga acattactaa tttgaatgga aaacacatgg Trp Phe Asn Cys Arg Lys Asn 465			1508
tgtgagtcca aagaaggtgt tttcctgaag aactgtctat tttctcagtc atttttaacc			1568
tctagagtca ctgatacaca gaataataatc ttatttatac ctcagtttgc atattttttt			1628
actattttaga atgtagccct ttttgtactg atataattta gttccacaaa tgggtgggtac			1688
aaaaagtcaa gtttgtggct tatggattca tataggccag agttgcaaag atctttttcca			1748
gagtatgcaa ctctgacggt gatcccagag agcagcttca gtgacaaaca tctcctttca			1808
agacagaaaag agacaggaga catgagtctt tgccggagga aaagcagctc aagaacacat			1868
gtgcagtcac tgggtgtcacc ctggataggc aagggataac tcttctaaca caaataaagt			1928
gttttatgtt tggaataaag tcaaccttgt ttctactgtt tt			1970

<210> 4
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 4
cctcgctggg agcaaaca 18

<210> 5
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 5
tctcaatggc atgggccaca t 21

<210> 6
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Probe

<400> 6
tctgacctac aggattgaaa attacacgcc a 31

<210> 7
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 7
gaaggtgaag gtcggagtc 19

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 8
gaagatggtg atgggatttc 20

<210> 9
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Probe

<400> 9
 caagcttccc gttctcagcc 20

<210> 10
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 10
 gcctcttgct actccaatat 20

<210> 11
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 11
 aaggtaagtg atggcttccc 20

<210> 12
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 12
 ctggcctttg tcttctttct 20

<210> 13
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 13
 gcagtggagg aaagctgtgc 20

<210> 14
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 14
 acaccccaga acagcagcag 20

<210> 15
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 15
 cgctgggaag ctgtgagaca 20

<210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 16
 ttgctcttgt gtttctagag 20

<210> 17
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 17
 ttctggacta agtccacatc 20

<210> 18
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 18
 cccatcattc ttcagggtgt 20

<210> 19

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 19
 tctccgcttt tcaacttgcc 20

<210> 20
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 20
 ttcaaccact gggccactat 20

<210> 21
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 21
 tttcagccca aagaattcct 20

<210> 22
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 22
 cagcatctgg tttcccagtc 20

<210> 23
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 23
 tgcttcatca ccttcagggt 20

<210> 24
 <211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense Oligonucleotide

 <400> 24
 atcaggcact ccacatctgg 20

<210> 25
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense Oligonucleotide

 <400> 25
 cagtgaggac aaactgagcc 20

<210> 26
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense Oligonucleotide

 <400> 26
 tgctcccagc gagggttccc 20

<210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense Oligonucleotide

 <400> 27
 aatcctgtag gtcagatgtg 20

<210> 28
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense Oligonucleotide

 <400> 28
 gcaaactctgg cgtgtaattt 20

<210> 29
 <211> 20
 <212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 29

tggtccacat ctgctcttgg

20

<210> 30

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 30

ggaaggcttt ctcaatggca

20

<210> 31

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 31

gtgacattac tccagagttg

20

<210> 32

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 32

ccttggtgaa tgtcagaggt

20

<210> 33

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 33

tgtctgcttg accctcagag

20

<210> 34

<211> 20

<212> DNA

<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 34
ccctgacaaa agatatcatg 20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 35
gagagttgtc ccgatgatct 20

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 36
ttcctccagg tccatcaaaa 20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 37
ttgaaaagca tgagcaagat 20

<210> 38
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 38
cccctccaat acctgggcct 20

<210> 39
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 39
catcttcacatc aaaatgagca 20

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 40
ctgaaattgt tgggtccacct 20

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 41
aacacgatgt aagttgtact 20

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 42
atggccgagt tcatgagccg 20

<210> 43
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 43
tagaatggga gagtccaaga 20

<210> 44
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 44

acatcaaagc cccgatatca

20

<210> 45

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 45

cactgaaggt gtagctaggg

20

<210> 46

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 46

cctgagctag ctgaacatca

20

<210> 47

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 47

gcttggatgc catcaatgtc

20

<210> 48

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 48

tttgggaacg tccatatatg

20

<210> 49

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 49
 ggccgatggg ctggacagga 20

<210> 50
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 50
 caaaggtag cttactgtca 20

<210> 51
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 51
 cccgaatcgt agttatagca 20

<210> 52
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 52
 ctttaaagaa catcacttct 20

<210> 53
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 53
 ttgtgcgcat gtagaatctg 20

<210> 54
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 54	
caacttccgg gtagaagggga	20
<210> 55	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 55	
aaacagaaat gaaattgagc	20
<210> 56	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 56	
catttggcag ttgtggccag	20
<210> 57	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 57	
aattcgtaag cagcttcaag	20
<210> 58	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 58	
cggacttcat ctctgtcggc	20
<210> 59	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 59	

tcctgaaca gccagttact

20

<210> 60

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 60

gtatccgtgt agcacattct

20

<210> 61

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 61

agttctaggg aagccaaagg

20

<210> 62

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 62

agcagcatcg atatgcttca

20

<210> 63

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 63

ttccagtgtt ttcctcagaa

20

<210> 64

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 64

atacctccag tatttgtag

20

<210> 65
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 65
 catagatcgt ttatattcat 20

<210> 66
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 66
 attttgggat aacctggatc 20

<210> 67
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 67
 ccaggaaagt catgtgctat 20

<210> 68
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 68
 gcatcaactt tgtggccaat 20

<210> 69
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 69
 aaatccatct ttcataaaa 20

<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 70
caaatttgta ttgtcttggt 20

<210> 71
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 71
aaaattctct tcgttttagg 20

<210> 72
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 72
ctattagctt tctggagagt 20

<210> 73
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 73
aaattagtaa tgttcaattt 20

<210> 74
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 74
ttggactcac accatgtgtt 20

<210> 75
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 75
ttcttcagga aaacaccttc 20

<210> 76
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 76
atgactgaga aaatagacag 20

<210> 77
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 77
ttatattctg tgtatcagtg 20

<210> 78
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 78
caaactgagg tataaataag 20

<210> 79
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense Oligonucleotide

<400> 79
aactaaatta tatcagtaca 20

<210> 80

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 80
 ttttgtaccc accatttgtg 20

<210> 81
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 81
 ctctggccta tatgaatcca 20

<210> 82
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 82
 ctctggaaaa gatctttgca 20

<210> 83
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 83
 atcaacgtca gagttgcata 20

<210> 84
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 84
 tcactgaagc tgctctctgg 20

<210> 85
 <211> 20

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 85
 gtcttgaaag gatatgtttg

20

<210> 86
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 86
 catgtctcct gtctctttct

20

<210> 87
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 87
 tgcttttctt ccgcaaaga

20

<210> 88
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 88
 gactgcacat gtgttcttga

20

<210> 89
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense Oligonucleotide

<400> 89
 ttttgtgtta gaagagttat

20